

**MIRAGE MP1**  
**HF WATTMETER**

The MIRAGE MP1 Wattmeter is designed to provide the HF amateur with a versatile Wattmeter, without having to use cumbersome add-ons or plug-ins.

The MP1 will measure forward or reverse power in three power ranges- 25, 200 and 2000 Watts. It will display either average or peak power. This allows for the best display of power output, whether on AM, CW or SSB.

When checking antennas, the MP1 will display SWR directly, without using extra charts or graphs. Optimum tuning and adjustment of the antenna is possible, even with as little as 2 Watts, from the transmitter.

The coupling unit may be mounted up to 4 feet from the meter, providing neater installations.

**SPECIFICATIONS:**

FREQUENCY RANGE	: 2-30 MHz
LINE IMPEDANCE	: 50 Ohms resistive
FUNCTIONS	: Power - FORWARD/REVERSE, PEAK/AVERAGE, SWR
POWER RANGE	: 25, 200 and 2000 Watts ( $\pm 5\%$ RF calibration + $1\%$ meter)
POWER CAPABILITY	: 1000 Watts continuous - 2000 Watts intermittent
SWR SENSITIVITY	: 1 to 2 Watts
DC POWER REQUIREMENT	: 9 VDC internal battery or optional AC adaptor
SIZE	: 5.75" H. X 4.5" W. X 5.75" D.

**INSTALLATION:**

The MP1 coupler has two SO239 coax connectors marked INPUT and OUTPUT. The radio is connected to the INPUT connector and the load, or antenna, is connected to the OUTPUT connector.

The coupler may be remotely mounted by removing the two screws that secure it to the meter case. Replace the two screws back into the coupling unit.

## CONTROLS:

- |                 |   |
|-----------------|---|
| RANGE SWITCH    | - This switch selects the full scale power that is to be read. It also turns the unit on and off.   |
| PEAK/AVG SWITCH | - This selects the desired display of power. AVG for CW, FM, AM or averaging of SSB. PEAK for CW or peak reading of SSB. This shows the true peak power output.                 |
| FWD/REV         | - FWD shows the power that is being transmitted while REV shows the returned or reflected power.  |
| SWR CAL/PWR CAL | - When reading power, this control is set at full counter-clockwise, in the PWR CAL position. For SWR, this control is turned clockwise to adjust the meter to read full scale. |
| LOW BATT        | - When the internal 9 V battery drops to approximately 6.75 Volts, the LED will start to flash, indicating it is time to change the battery.                                    |

## OPERATION:

- |                       |  |
|-----------------------|--|
| POWER                 | - To measure power, connect the MP1 between the transmitter and the load. Select the desired power range, set the SWR CAL/PWR CAL switch to PWR CAL. To display the forward power, set the FWD/REV switch to FWD. For reverse or reflected power, switch to REV. The actual power being transmitted is the difference between the forward and reverse power reading. |
| PEAK OR AVERAGE POWER | - For FM, AM, Slow speed CW or to measure your average power on SSB put the switch on AVG. With the switch on PEAK, the actual peak power will be displayed. This can be used on AM, Fast CW, and SSB.   |
| SWR                   | - Connect the MP1 between the transmitter and the load to be measured. Set the   |

# 5 year warranty

on parts and labor  
(1 year on RF pwr trans.)

## A.C. ADAPTOR

## MAINTAINANCE

## BATTERY CHANGE

range switch to the proper power range. The FWD/REV switch to FWD. Key the transmitter and adjust the SWR CAL to give a full scale reading. Switch to REV and read SWR on the SWR scale of the meter. SWR may be measured with input powers between 1-2 Watts to over 1000 Watts.

The best accuracy is obtained with 10-15 Watts and this is the recommended power range, for SWR measurments.

- Any 9 Volt to 12 Volt AC adaptor that uses a .1 inch center pin may be used to power the MP1 and extend the battery life. When the adaptor is plugged in, the battery is disconnected.
- The MP1 is designed to give years of trouble free performance. It is recommended that the MP1 be returned to the factory for any required service or calibration.
- The battery is located inside the back cover. When the LOW BATT LED flashes, replace the battery with a fresh 9 Volt battery (Eveready 216 or the equivalent).

## LIMITED WARRANTY

Any MIRAGE WATTMETER found defective, in either materials or workmanship, within 1 year from date of purchase, by the original owner, will be replaced or repaired, at no charge, if the product is returned to the factory, freight prepaid.

MIRAGE assumes no responsibility for any antenna, radio or accessories connected to this product.

The warranty card must be submitted, within 10 days from purchase, to obtain warranty service.

This warranty does not apply to units that have been misused or accidentally damaged.

**MIRAGE**  
COMMUNICATIONS EQUIPMENT

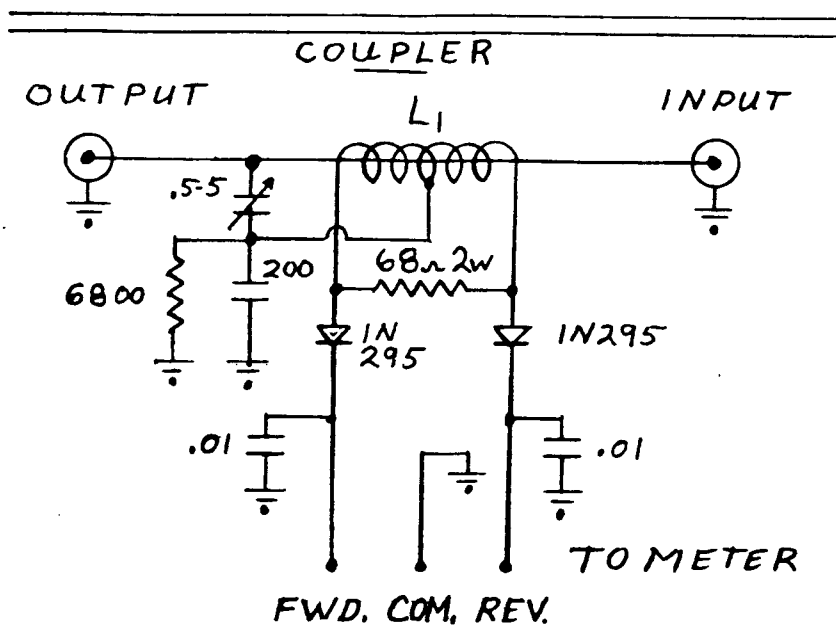
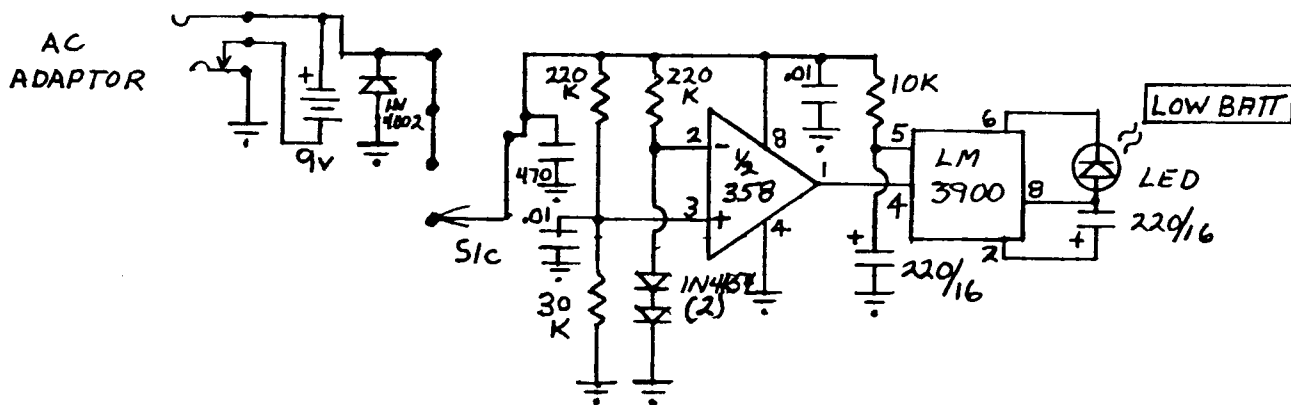
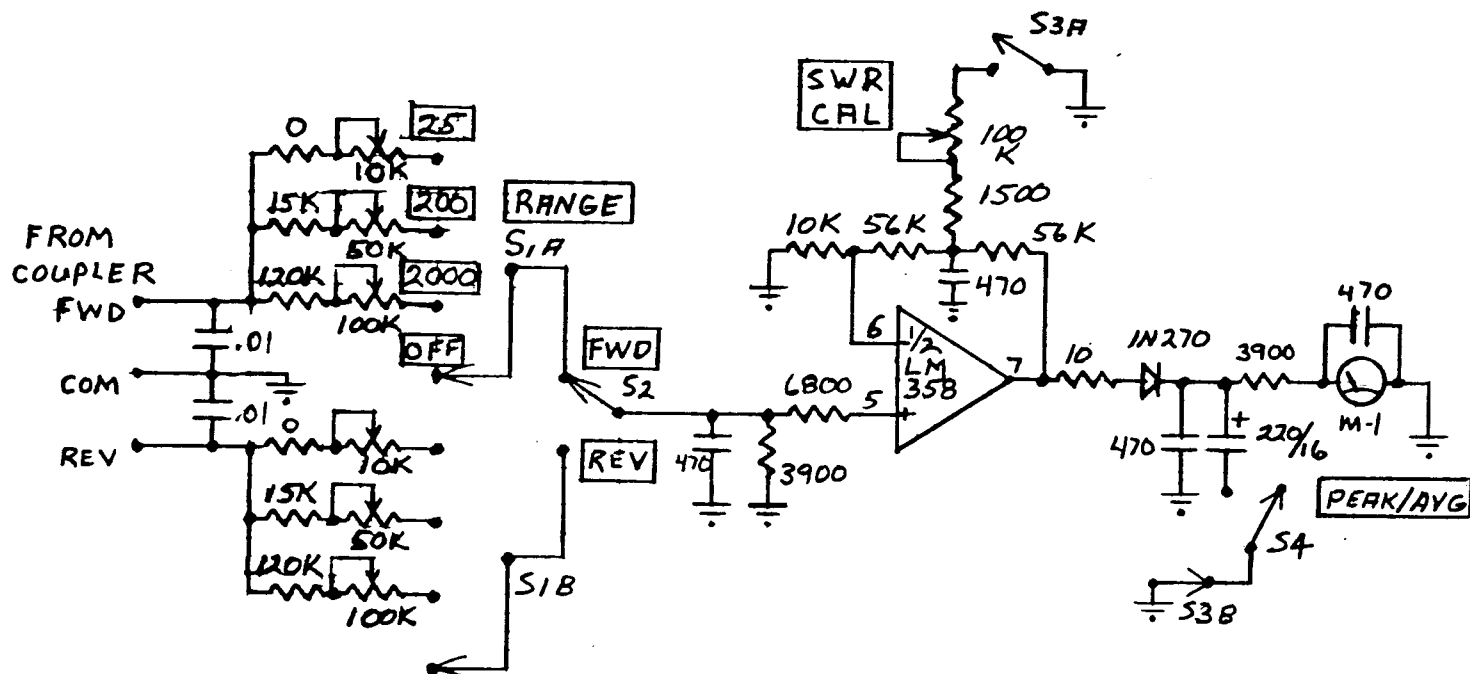


DIAGRAM  
MPI  
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